

## ASH YELLOWS IN MINNESOTA

by **D. W. French, Professor**  
**Department of Plant Pathology**  
**University of Minnesota**

Ash yellows has been confirmed in a woodlot east of Rochester, killing large trees and the understory ash as well. The disease has been there for possibly 3-4 years but has not been detected in any other woodlots in that part of Minnesota.

Ash yellows has caused extensive losses in the north-eastern and central states including Indiana and Iowa. Dr. Wayne Sinclair of Cornell University suggested that the disease is limited by colder climates and even though occurring in eastern Canada has been limited in its northward movement. Thus there is some optimism that the weather in Minnesota may not favor development of the disease in this state. A similar disease, elm yellows (also known as phloem necrosis of elm), was found in Minnesota in 1976 in three widely separated areas - Alexandria, North St. Paul and Rochester, but has not been found since. That year, 1976, could very well have been ideally suited for the movement of the vectors of elms yellows. Because we have not seen elm yellows since 1976 suggests that these organisms may not be able to survive in Minnesota.

There is reason to be optimistic that ash yellows will not cause the losses here that it has in Iowa and Indiana, however the situation suggests planting fewer ash.

Ash yellows can be identified by its ability to kill trees in 1-3 years and groups of trees are affected. Infected trees have thinner crowns, yellow foliage and witches brooms, which occur on the main stem or large branches, sometimes seemingly after the tree is dead.

Suspected trees should be reported to the University of Minnesota, Department of Plant Pathology for checking. Ash are subject to other problems and every problem on ash is not ash yellows.

We should not completely stop planting ash but it may be wise to plant fewer of them. Following Dutch elm disease, 35% or more of newly planted trees were ash.

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## A VISIT TO HAZELTINE

by **John Harris, Lafayette Club**

I recently made a call on Chris Hague at my request to view their new pumping station. It was an education to say the least.

Two deep wells supply a holding pond, one of which is a new submersible and a second that has been refurbished. They can fill the holding pond faster than they can drain it via irrigation. The holding pond was enlarged and dredged to a depth of 15 feet. I can't recall the capacity but many zeros followed the number two. A 24" culvert fed a wet well which was 20 feet deep. Three switches controlled the high, low water level and the 3rd for flooding. The pumping station is a prefab with 3 pumps. A 60 hp, 40 hp and a jockey 20 hp delivering up to 1300 GPM. The water flow is monitored by a transducer and flow meter. The data is fed into a small chip in the control box thusly back out to the pump starts and electronic butter fly valves. Only the pumps and water flow needed is delivered, at any rate, in any sequence. Other controls include phase cut out, low pressure cut out, high pressure cut out, heat sensor cut out, a pressure graph, and a flow meter.

The pump house itself was partially buried with vents on each side of the house below grade, facing the pump shafts. A ceiling fan drew air up and out; therefore pulling air through the vents and over the pumps. The added benefit of incoming air, cooled by the surrounding soil was a sound idea.

Outside the pump house there are three green lights and one red, indicating which pump is running or, not at all at a glance. Sky lights in the roof provide ample daytime light and are mounted directly over the pumps for easy removal.

There are other features but for reasons of accuracy maybe you should ask the horses' mouth. Chris was most considerate and very cooperative to take an hour and a half out of his busy schedule and devote it to my education. I thank you and hope to return the favor.

